

Influence of Stakeholder Communication on Performance of Kabonon-Kapkamak Irrigation Project in Elgeyo Marakwet, County.

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Influence of Stakeholder Communication on Performance of Kabonon-Kapkamak Irrigation Project in Elgeyo Marakwet, County.

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Abstract

Irrigation projects are among vital income generating activities as they enhance food security, create employment opportunities, improve nutritional status of a nation and result to good health in the society. Poor performance of the existing public irrigation schemes is an emerging issue of concern since it slows the irrigation transition process. The purpose of this study was to examine the influence of stakeholder communication on performance of Kabonon-Kapkamak irrigation

project. The study utilized stakeholder theory. The study employed a descriptive survey research design targeting all employees of irrigation projects in Kenya. Accessible population of 301 was subjected to stratified random sampling to obtain a sample size of 185 respondents which are project manager 1, farmers 165, Ministry of Agriculture officials 5 and National Irrigation Board Representatives 14. Primary data was collected using a questionnaire and interview schedule. Pilot study was done to test validity and reliability of research instrument at Perkerra irrigation scheme in Baringo County. Content validity was used as a validity test while reliability was tested using Cronbach's alpha coefficient. Data collected was analyzed using descriptive and inferential statistics. A multiple regression model was used to measure independent variables against the dependent variable. The study found out that stakeholder communication ($\beta_1=0.257$; $p<0.05$) positively and significantly influence irrigation project performance. The findings of this study are expected to provide a basis for formulating irrigation project implementation policies by the government and management practices by other institutions. The academic community will benefit from the results of the study as it will serve as a reference point on empirical data pertaining to stakeholder involvement and also to identify areas for further study. In addition, the study findings are expected to guide Non-governmental organizations (NGOs) wishing to implement stakeholder involvement strategy in enhancing performance of irrigation projects.

Introduction

Managers of project-oriented organizations today are looked with consistently expanding difficulties and complexity because of the quick changing condition in which projects are regularly done (Schroeder, 2017). A decent correspondence and commitment of project stakeholders can result in stakeholders and accomplices who are more urged to team up to fabricate an arrangement of backings that reacts to the requirements of the intended beneficiaries (Signori, 2017). Moreover, filling in as partners towards taking care of emerging issues over the span of works produces positive input and shared regard (Pizlo & Stefanov, 2013). Besides, starting organization at the beginning periods of the project life cycle encourages project stakeholders' shared comprehension and energy about each other's

perspectives and sets up lines of effective correspondence and productive planning (Duffy, 2015).

Stakeholders can contribute in a type of information or support in forming a project brief. An irrigation project disappointment is strongly identified with a stakeholder impression of project value and their association with the project group (Fung, 2015). Early engagement with stakeholders in developing governance structures provides an irrigation project with insight into their concerns and priorities outlining project performance, as evidenced by Elias (2015). The way to shaping fruitful project connections maybe understanding the diverse stakeholders have distinctive desires for the project and distinctive meanings of project achievement. A project's prosperity or disappointment is

emphatically impacted by how well it lives up to its stakeholder's desires and their impression of its value (Prostejovska and Tomankova, 2017). Stakeholder desires and recognitions can be affected by the capacity and readiness of the project manager to connect viably with the project's stakeholders and oversee organizational politics (Mitchell, Van Buren, Greenwood, & Freeman, 2015).

Interests of positive stakeholders are best served by encouraging the effective finish of the project. Negative stakeholders are frequently ignored by the project group at the danger of neglecting to convey their projects to a fruitful end. The negative stakeholders' advantage would be ideally serviced by hindering the project's advancement by requesting more broad natural surveys (Sulkowski & Waddock, 2014). Project governance is a way to deal with a particular project that means to indicate an institutionalized arrangement of rules and controls with which a project needs to go along (Carpenter, 2008). It acknowledges the uniqueness of projects and characterizes approaches to protect, arrange and adjust associations between associations. The achievement of a given project is estimated against preset guidelines of precision, fulfillment, cost and time (Macaluso, 2014). Project groups or systems themselves can adjust the governance as indicated by the idea of projects, while, the arrangement of the project itself to associations procedure is finished by support or other outside governing body (Ika, 2012).

The project proprietor's way to deal with the project administration procedure is essential amid the dynamic front-end arranging stage, despite the fact that many project management bodies tend to take a more precise, plan-like methodology. It is amid the front-end that the project's stakeholders' advantages and inclinations and other necessity components impact the project definition and henceforth establish framework for the project targets and achievement criteria (Kock, Heising, & Gemünden, 2016).

Many managers are under colossal strain to finish complex and uncertain assignments in the most limited measure of time without relinquishing the expense and quality criteria or leaving the clients and end-clients disappointed (Ruoslahti & Tikanmäki, 2017). Irrigation projects face unforeseen challenges as managers fail to understand the environment in which a project operates (Koç, 2013). Undertaking a project is a high-hazard action where uncertainty is multi-layered concepts which can be about the organization, the relationship with other

organizations or other features of the change context (Yin, Pfaff & Kunreuther, 2010).

In a project situation, stakeholders are generally various, and can shift fundamentally in the level of impact in the two headings. Past studies have shown that in Russia and Germany, factors including stakeholder association, proprietorship and duties to the project usage have upgraded execution of irrigation projects (Nederhand & Klijn, 2016). Therefore, most of them emphasize on stakeholder driven methodology if mediation needs to keep up its essence after the exit of donor support. In India, 77 major and 86 medium irrigation projects were postponed and the expense of the projects rose by 231% because the peculiarity of irrigation projects lies in the extent of stakeholder involvement (Rai, Singh & Upadhyay, 2017).

Irrigation projects in Africa have experienced poor water administration rehearses and throughout the years, irrigation framework task has been constrained to development of new projects and in some cases recovery of existing ones (Ali, 2010). Implementation and performance of irrigation project initiatives are likely to be affected by lack of commitment and poor relationship between the key stakeholders (Dwivedula & Bredillet, 2010). Moreover, in improving project delivery through successful responsibility, the key necessities ought to be that best or senior management group must be clear about vital objectives and the jobs and connection between the distinctive organizations and stakeholders included.

Failure of irrigation projects and consequences for a different approach did not generate revenue and this was attributed to lack of adequate site selection and preparation for irrigation fields in Burina Faso (Dembele, Yacouba, Keita & Sally, 2011). Small holder irrigation plots in most creating nations including Zimbabwe have turned out to be unsustainable after withdrawal of external help. The pre-autonomy network claimed small holder irrigation plans had a genuinely effective administration system that, shockingly, did not have the network possession and expert execution (Musara, Chikuvire & Moyo, 2010). It was uncovered that farmers had unsustainable sources of employment that were bargaining their pledge to schemes. Therefore, stakeholder engagement in schemes lacks owners leading to failure of development agencies to include the beneficiary farmers on key issues about their irrigation scheme. (Stanton, 2017).

Kenya has an expected irrigation capability of 1,300,000 hectares (Ha) and a drainage capability of

600,000 Ha. Right now 114,600 Ha of irrigation and 30,000 Ha of drainage have been developed (SRA, 2004). According to Ngenoh, Kirui, Mutai, Maina & Koech, (2015) the size of land under irrigation had a huge (at 1%) and constructive outcome on the performance of public irrigation scheme. Essentially, per section of land activities and support cost that was gathered in the plan had a noteworthy (at 10%) and constructive outcome on the performance of public irrigation schemes; in any case, the measure of benefactor financing to the scheme had a critical (at 10%) and negative impact on the performance of public irrigation schemes. Subsequently, performance can be enhanced if agriculturists are treated as customers, investors or as co-managers of irrigation scheme as opposed to simply beneficiaries.

The Galana Kulalu project has seen the two governments Kenya and Israel establish a working framework on water resource management, technologies, irrigation and capacity building which was signed in 2009 in accordance with Jerusalem declaration. Based on the Israel expertise in the water sector, the Kenyan side expressed areas of interest and sought assistance and counsel from Israel hence coming up with the Mashav-capacity and training on irrigation and drainage programme (NIB, 2018). The Vision 2030 perceives the basic job that irrigation and drainage are relied upon to play and expresses that "to promote agricultural productivity, the zone under irrigation and drainage will increment from 140,000 to 300,000 hectares". However, the commitment made by stakeholder cooperation helps in managing and reinforcing the irrigation intercessions before and after implementation of project. Community involvement in irrigation schemes is key for exemplary performance as this is a link between project portfolio management and stakeholder involvement (Stanton, 2015). The advancement of irrigation is crucial for the rural population dependent on agrarian production, yet irrigation projects have experienced performance, as farmers have felt little proprietorship for the government projects. This study therefore examines the influence of stakeholder involvement on performance of Kabonon-Kapkamak irrigation project in Elgeyo Marakwet County.

Statement of the Problem

Irrigation projects are among vital income generating activities as they enhance food security, create employment opportunities, improve nutritional status of a nation and result to good health in the society. Organizations have put emphasis on

the significance of maintaining and enhancing performance of existing irrigation schemes in spite of territory extension and advancement of new irrigation. In Kenya, the government and advancement accomplices demonstrate a developing interest for creating irrigation projects. Poor performance of the existing public irrigation schemes is an emerging issue of concern since it slows the irrigation transition process. Irrigation projects initiated in Elgeyo Marakwet County have taken long to be implemented and others have collapsed despite continuous funding of those projects to meet expectations of the beneficiaries. This was noted in January 2017 by Auditor-General report which questioned agency's delay of four multi-million shillings irrigation projects in North Rift locale. The auditor referred to that the postponement in completing Tot irrigation project, the Aror scheme and dispatching of the Ptokou and Sangat irrigation projects initiated by Kerio Valley Development Authority (KVDA) has resulted to cost escalation (Business Daily, January 2017). Consequently, this negatively affects beneficiaries on food security while compromising their livelihoods in the long run. The irrigation projects also consume very large quantities of resources and poor performance leads to change of operations of the project parallel to intentions of initiation.

In Kenya, previous research has investigated the determinants of irrigation project performance. However, little has been done on stakeholder involvement on irrigation project performance as most scholars have concentrated on the stakeholder analysis for an organization performance. The findings however are not sufficient enough to provide a framework for stakeholder involvement on performance of irrigation projects. Therefore, this study seeks to find out why irrigation projects take long to be implemented and why others poorly perform. It therefore examines influence of stakeholder involvement with regard to communication, knowledge, project governance and environmental uncertainty on performance of Kabonon-Kapkamak irrigation project in Elgeyo Marakwet County.

Objective of the Study

The purpose of this study was to examine the influence of stakeholder communication on performance of Kabonon-Kapkamak irrigation project in Elgeyo Marakwet County.

Research Hypothesis

H₀₁ Stakeholder communication has no significant relationship with performance of Kabonon-

Kapkamak irrigation project in Elgeyo Marakwet County.

Theoretical Review

Stakeholder theory

The stakeholder theory was first proposed by Edward Freeman in 1984. It characterizes a stakeholder as any gathering or person who is influenced by or can influence the accomplishment of an association's objectives. Freeman depicts how a solid organization never dismisses everybody engaged with its prosperity and this see paints the professional workplace as a biological system of related groups, every one of whom should be considered and fulfilled to stay with the sound and fruitful in the long term. This hypothesis says the stakeholder biological system includes anybody put and associated with, or influenced by, the organization: representatives, environmentalists close to the organization's plants, merchants and governmental offices (Mitchell et al., 2015).

Craig McDonald in his view says, corporate obligation and business morals don't bother with their own extraordinary concentration inside the organization, as long as the organization practices certified stakeholder theory for each one of its stakeholders, from suppliers and workers to production line workers and preservationists (Signori, 2017). An association ought to be cautious not simply of the people who hold stock in the association, yet what's more of the people who work in its stores, the people who work and live near its assembling plants, the people who work with it, contenders, as the association may shape the scene in its industry. It outlines how management can satisfy the interests of stakeholders in a project (Freeman, Harrison, Wicks, Parmar, and De Colle, 2010). The assumption and presumption of shareholder hypothesis is that organizations are private property, so directors should run business for expanding investors' interests. Then again, the hypothesis expects that organizations will be associations or social establishments, consequently directors ought to think about the entirety of stakeholders' interests and "equity for all" (Judge, 2009).

From a diagnostic point of view, a stakeholder approach helps project managers by advancing examination of how the project fits into its bigger condition, how its standard working systems influence stakeholders inside the irrigation project. The theory is relevant to this study as it points out getting all the Kabonon-Kapkamak irrigation project

stakeholders and their interest's row in the same direction as it is critical to the irrigation project's success. It shapes the perception of the project stakeholders and the rest of the surrounding communities. Schiff, (2011) adds that once the project stakeholders, their biggest needs, interests are identified, and it helps to draft a communications plan which encourages collaboration to manufacture an arrangement of backings that reacts to the requirements of the intended beneficiaries.

Freeman's view is contrary to the long-held shareholder hypothesis proposed by financial expert Milton Friedman that in free enterprise, the main stakeholders an organization should think about are its investors (Friedman, 2016). This economist was a devotee to the free-showcase framework and no government intercession. Friedman added that organizations are constrained to make a benefit, to fulfill their investors, and to proceed with positive development. This conviction helped shape his shareholder hypothesis of private enterprise: that an organization's sole obligation is to profit for its investors. By complexity, Freeman, (2009) proposes that an organization's stakeholders are "those gatherings without whose help the association would stop to exist."

Empirical Review

Stakeholder Communication and Performance of Irrigation Projects

Stakeholders must understand what the project is endeavoring to accomplish since correspondence with project group assembles a comprehension on the objectives and the advantages to the irrigation project beneficiaries (Thoma, 2013). In the event that stakeholders plan changes in a business that will affect the nearby network, correspondence with neighborhood government offices, pressure groups and the community will assemble a comprehension of the aims as it focuses on the success of the business (Grant & Drew, 2017).

Therefore, an effective correspondence program must spotlight on the stakeholders who have the best effect on the project achievement (Greenberger, 2016). A solid relationship brings a scope of advantages as supplier communications helps to build a supply chain that is aligned with the investment needs as observed by Berrah and Cliville (2008). Alison and Buchsbaum (2013) argued that a well-defined communication causes an association to manufacture constructive associations with individuals and different associations, for example, the media or particular interest parties, who impact different stakeholders. According to Saidu and Shakantu (2017) irrigation projects take as many years before they are completed due to poor

relationships among stakeholders and this leads to cost overruns.

Sunindijo (2015) also found out that a project fails if a manager lacks understanding of the project stakeholder interests and attitudes to fine tune communications that contribute towards project performance. The earlier stakeholders are engaged, the more likely one realizes key benefit. It is important to inform, consult, and involve partners for a better arranged, educated, and responsible approaches, projects, programs, and services (Spector, 2015). A study by Adeniyi & Dinbabo (2016) on evaluating outcomes from stakeholders' perception from an irrigation project in Nigeria has indicated that giving chances to enter from a different group of stakeholders is fundamental to sound design and implementation of an irrigation project. Velea & Lache (2015) added that failure to provide ongoing and meaningful opportunities for stakeholders to contribute as specialists in their field, have their issues heard, and add to the basic leadership process compromises delivering the project objective.

Argument centers on the potential and risks associated with engaging stakeholders to bring about project performance. A study by Missonier et al., (2014) on stakeholder examination and commitment in projects from stakeholder social viewpoint to stakeholder relational found that there are considerable risks inherent in relying on stakeholder engagement for result achievement including misguided assumptions around stakeholder priorities in respect of project performance to resolve stakeholder concerns. Ilyin & Teslya, (2016) critiqued on effective stakeholder communication for project performance. Their study on vital business regions as a system for planning stakeholder interests while dealing with an organization's project portfolio points out that stakeholder communication is a mechanism that in a normative sense and maybe able to assist project managers in rethinking their interests in favor of project performance.

Performance of Irrigation Projects

Past studies show that projects require huge exemplary stakeholder management and this demands great project management practices to guarantee an incentive for cash (Missonier & Loufrani-Fedida, 2014). This builds investor esteem and passes on delicate and hard advantages to a few stakeholders (Moraveck, 2013). Project administration manages the techniques and procedures used to characterize its destinations by giving the way to accomplish the targets and to screen advance (Karrenberg, 2013). As of late,

various associations, from government organizations to benefit arranged business, have understood the significance of connecting with stakeholders in circumstance appraisal and administration (Fowler & Biekart 2017).

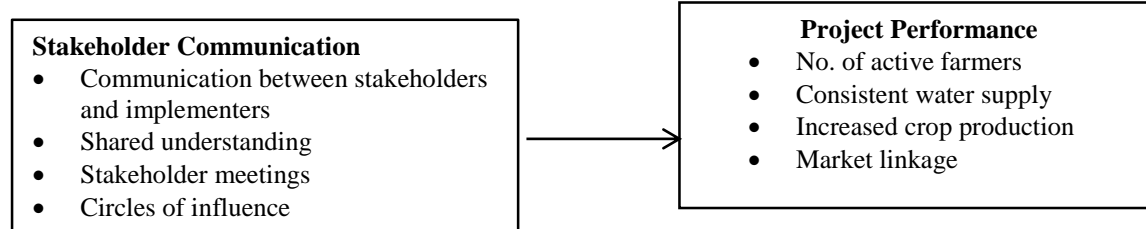
High water interest for serious cultivating has prompted an opposition between various social perspectives and water utilizes (Sahuquillo, 2017). A report on the International Water Management Institute demonstrated that the issue of water asset administration in farming worries in Kenya isn't just specialized and designing angles about the correct irrigation framework or advances to utilize, yet in addition authoritative perspectives about water conservation (WMI, 2010). Staying informed concerning project advance and falling data to other people who need to know is also vital during project cycle. The stakeholder must not skip project gatherings and depend upon others to keep them up to speed. This is presumably the frequently revealed indication of fizzled projects where key stakeholders progress toward becoming disassociated with a project and it begins to float, stray from the necessities and go to pieces (Heravi, Coffey & Trigunarsyah, 2015). Communicating throughout the life of the project contributes to the success of a project (Moraveck 2013).

Market information is lacking in irrigation projects in that agriculturists who transport their deliver to a far off town may discover the market overflowed (Gantla & Lev, 2015). Low levels of public and private investment in irrigation in the past has generally hindered irrigation project development in Kenya (Mati, 2008). In Ghana, irrigation advancement is driven by the private segment and by smallholder irrigation schemes with awesome accentuation on economic improvement (Akudugu, 2013). The private segment has led irrigation advancement in territories near urban communities for neighborhood vegetables and high-esteem plant deliver for the fare showcase (Stöber, Moraza, Zahl & Kagai, (2017). The scholars added that areas endowed with an adequate level of infrastructure and markets have potential for high-tech efficient irrigation.

Lederer, Ogwang & Karungi (2017) suggested that tackling existing neighborhood assets and stakeholders would guarantee the smooth conveyance of rustic projects. In actuality, Lexa (2017) posted authority as another factor that drives the level of support in a network and it needs to do with the level of responsibility and abilities of individuals who take up positions of authority to invest in a specific point or area. In this way, they are the ones who propose thoughts and are

effectively included to urge others additionally to take an interest while some other individuals can't submit themselves in these jobs since they don't have room schedule-wise and ability to take up the positions of authority.

Conceptual Framework



Independent variables

Figure 2.1: Conceptual Framework

Dependent Variable

3.0 Research Methodology

Research Design

The investigation adopted descriptive survey which is a strategy for gathering data by meeting or regulating a survey to an example of people (Savita, Dominic & Ramayah, 2016). It tends to be utilized when gathering data about individuals' attitudes, opinions, habits or any of the assortments of training or social issues. Descriptive research design was chosen for the research study as it gives the researcher a possibility to observe the phenomenon in a completely natural and unchanged natural environment

Study Population

A population is an all-around characterized set of individuals, administrations, components, and occasions, group of things or family units that are

being explored (Denscombe, 2008). Target population is the whole gathering of individuals or articles to which the scientist wishes to sum up the study findings. In this study, the target population was all employees and beneficiaries of irrigation projects in Kenya. Accessible population is the population in research to which the researcher can measure. In the study, the accessible population was all employees and beneficiaries of Kabonon-Kapkamak irrigation project. These are 301 respondents which comprised of Project manager 1, Farmers 281, Ministry of Agriculture officers 5 and National Irrigation Board Representatives 14. This has been described in a sampling frame, Table 3.1, which is a list, directory or index of cases from which a sample can be selected.

Table 3.1 Accessible Population

Category	Total Population
Project manager	1
Farmers	281
Ministry of Agriculture officers	5
National Irrigation Board Representatives	14
Total	301

(MoA, 2010)

Sample Size & Sampling Technique

A sample is a number of people or things chose from a population. Riffenburgh (2006) expressed that the right sample size relies upon the reason for the examination, the nature of the population under investigation, level of precision required, and the foreseen reaction rate, number of factors included

and whether the exploration is quantitative or qualitative. Stratified random sampling was used in this investigation and it is a strategy for testing that includes the division of a population into smaller groups known as strata which are framed dependent on individuals' shared properties or attributes (Ozel & Kadilar, 2015).

Stratified random sampling ensures that each subgroups of a given population are adequately represented within the whole sample population of a research study (Ozel, 2015). In the study, the entire population of Kabonon-Kapkamak irrigation project was divided into four homogeneous groups which were project manager, farmers, Ministry of agriculture officials and National Irrigation Board Representatives. The study took the whole population of project manager, Ministry of Agriculture officials, and National Irrigation Board representatives.

The sample size for farmers was obtained was obtained using Yamane formulae (1967) which was

then subjected to simple random sampling to select farmer respondents to participate in the study.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size required

N is the population size =281

e is the level of precision =0.05

$$n = \frac{281}{1 + 281(0.05)^2}$$

n =165

From the accessible population three hundred and one (281), a sample of one hundred and eighty-five (185) respondents was picked as shown in table 3.2.

Table 3.2 Sample Size

Category	Total Population	Sample size
Project Manager	1	1
Farmers	281	165
Ministry of Agriculture officials	5	5
National Irrigation Board Representatives	14	14
Total	301	185

Research Instruments

A questionnaire and interview schedule was used to collect primary data for the study. An interview schedule is an arrangement of prepared questions intended to be asked precisely as worded (Sutherland, 2008). It has a standardized format which implies similar questions are asked to every interviewee in a similar request. It was used to obtain information from the project manager, National Irrigation Board representatives and Ministry of Agriculture officials.

A questionnaire is a printed self-report form designed to elicit information that can be obtained through written responses of the research study (Best, 2011). It was chosen for the study to collect primary data from the farmers because it can be carried out by the researcher or by any number of people with limited effect to its validity and reliability hence it ensures a high response rate from the respondent (Lu, 2013). A Likert scale was used in the questionnaire with closed ended questions that had options which were determined by the researcher and they were easier to administer and analyze (Balbi & Triunfo, 2012). The questionnaire was divided into two sections; section one consisted of questions on demographic characteristics of the respondent like age, gender, land ownership, among others. Section two comprised of specific questions in regards to constructs of the study; stakeholder communication, stakeholder knowledge, project

governance, environmental uncertainty and project performance

Pre testing of Research Instruments

A pilot study is a small scale preliminary study conducted in order to validate the research tool. It helps to improve upon the study design prior to performance of a full-scale research project (Miller, 2009). 10% of the study sample size will be the number of participants for pilot as suggested by Friede & Kieser (2006). The pilot study was conducted among 19 respondents including farmers, Ministry of Agriculture officials and National Irrigation Board officials at Perkerra Irrigation Scheme in Baringo County.

Validity of Research Instrument

The validity of the research instrument is the extent to which it measures what it is supposed to measure. The study instrument validity is the degree to which results obtained from the analysis of the data actually represent the variables of the study (Kitagawa, 2013). The instrument was validated in terms of content in consultation with the university supervisor to improve the questionnaire before carrying out data collection.

Reliability of Research Instrument

Reliability is the ability of a research instrument to consistently measure characteristics of interest over time (Beery, 2013). Reliability is concerned with consistency, dependability or stability of a test.

Reliability test was conducted as a test of whether data collecting instrument yielded the same result on repeated trials. The researcher measured reliability of the questionnaire to determine its consistency in testing what it is intended to measure. Internal reliability analysis was measured using Cronbach's Alpha coefficient. Cronbach's Alpha coefficient with threshold value at 0.7, which measures the internal consistency by establishing if certain item within a scale measures the same construct (Dominguez-Lara & Merino-Soto, 2017).

Data Processing and Analysis

The data collected was coded, organized and edited to remove repetitions and errors that may affect data analysis. The cleaned data was analyzed using descriptive and inferential statistics. Descriptive Statistics is a discipline that quantitatively describes important characteristics of a data set and it is separated into proportions of central tendency and measures of variability, or spread (Rao, 2010). Proportions of focal inclination incorporate the mean, middle and mode while proportions of inconstancy incorporate the standard deviation or change, the base and greatest variables, kurtosis and skewness. Quantitative data from the survey will be coded and investigated utilizing the Statistical Package for Social Sciences (SPSS) adaptation 24. The SPSS will be utilized to run expressive insights, for example, recurrence and rates in order to introduce the quantitative information in type of recurrence tables, outlines and diagrams dependent on the real research questions.

Inferential Statistics refers to generalizing information from the sample where results of analysis of the sample will be derived to the bigger population from which the example is taken. It is used to decide the probability of properties of the population based on the properties of the example, by utilizing probability theory (Farcomeni,

2008). The noteworthy inferential measurements depend on the factual models, for example, Analysis of Variance, chi-square test, understudy's t dissemination and relapse investigation. Strategies for inferential measurements incorporate estimation of parameters and testing of hypothesis. Regression model will be used in analysis as it examines the simultaneous effects of the independent variables on a dependent variable (Orme & Combs-Orme, 2009). A multiple regression model was used to measure the influence of stakeholder involvement on performance of Kabonon-Kapkamak irrigation project with only one dependent variable and four independent variables.

The regression model will take the form as shown below:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon \dots\dots\dots \text{Equation 3.1}$$

Where:

Y represents performance of Kabonon-Kapkamak irrigation project.

β_0 represents constant or Y intercept.

β_1 represent coefficients of independent variable.

X_1 represent stakeholder communication.

ϵ represent error term

4.0 Data Analysis, Presentation and Interpretation Response Rate

Response rate is the quantity of individuals with whom semi-structured questionnaires were appropriately finished partitioned by the aggregate number of individuals in the whole sample (Fowler, 2004). Out of 185 research instruments issued to respondents, 162 were returned for analysis when completely filled and this accounted for a response rate of 87.6%. According to Mugenda and Mugenda (1999) a response rate of 70% and above is acceptable and therefore, a response rate of 75% was satisfactory for data analysis as shown in Table 4.1.

Table 4.1 Response Rate

Category	Frequency	Percentage
Administered	185	100.0
Returned	162	87.6

Reliability Test Results

Reliability is concerned with consistency, dependability or stability of a test. Reliability analysis was done using Cronbach's Alpha coefficient to measure the internal consistency of the

research questionnaire. The results are shown in Table 4.2. The study results in Table 4.2 revealed that all variables had Cronbach's Alpha coefficients greater than 0.7. This implies that the research instrument used for data collection was reliable.

Table 4.2 Reliability Test of the Research Questionnaire

Items	Cronbach's Alpha	Test Items
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Stakeholder Communication	0.986	4
Project Performance	0.967	4

Demographic characteristics of the Respondents

The background information outlined in this part relates to the respondents' gender, level of education, age bracket, and number of years the respondents had operated in the current farm, farm ownership and position of respondents in the irrigation project.

Distribution of Respondents by Gender

The study examined on the distribution of respondents by their gender and analysis results are as shown in Table 4.3. The study findings indicated

Table 4.3 Distribution of Respondents by Gender

Gender	Frequency	Percent
Male	109	67.3
Female	53	32.7
Total	162	100.0

that majority of respondents who participated in the study were male 109 (67.3%) while female were 53 (32.7%). This gives implication that the study considered both genders in obtaining information concerning influence of stakeholder involvement on performance of Kabonon-Kapkamak irrigation project in County to ensure that there was no biasness. The study also gives an implication that majority of male participate in operations of Kabonon-Kapkamak irrigation project in county.

Distribution of Respondents by Level of Education

The study examined the distribution of respondents by their level of education and the results of analysis are shown in Table 4.4. The study also considered education level of the respondents where majority of them had secondary certificate 104 (64.2%). It was followed by those with primary education certificate representing 38 (23.5%), those with diploma

certificate were 12 (7.4%) and those with bachelor's degree were only 8 (4.9%). This gives an implication that the study obtained information from respondents across all education levels. It also revealed that respondents who participated in the study had formal education and they were able to give accurate information concerning influence of stakeholder involvement on performance of Kabonon-Kapkamak irrigation project in County.

Table 4.4 Distribution of Respondents by Level of Education

Education Level	Frequency	Percent
Primary school	38	23.5
Secondary certificate	104	64.2
Diploma/Certificate	12	7.4
Bachelor's degree	8	4.9
Total	162	100.0

Distribution of Respondents by Age

The study examined the distribution of respondents in regards to their age bracket. The results of analysis are shown in Table 4.5. The study findings on age bracket indicated that respondents who had 18-20 years were 16(9.9%), those with 20-30 years were 48 (29.65), respondents with 31-40 years were

56 (64.6%), while those with 41-50 years were 34(21.0%) and those who were above 50 years were 8(4.9%). Therefore, the study considered all age brackets that are associated with irrigation project in County. It shows that most farmers are in the youth age bracket who majorly contributes to operation of the irrigation project in to enhance food security.

Table 4.5 Distribution of Respondents by Age

Age Bracket	Frequency	Percent
18- 20 years	16	9.9
20-30 years	48	29.6
31-40 years	56	34.6

41-50 years	34	21.0
Over 50 years	8	4.9
Total	162	100.0

Distribution of Respondents by Number of Years in Operation on the Current Farm

The study also examined how respondents were distributed according to the number of years in operation on the current farm. The results are shown in Table 4.6 and the study findings revealed that majority had operated on the farm for over 5 years 118(72.8%), 40(24.7%) of respondents had operated in the farm between 1-5 years and only 4(2.5%) of

respondents had operated in the farm for less than 1 year. The findings implied the majority of respondents who have operated their farms for more than 5 years had enough experience concerning the irrigation project performance. However, they were able to give a reliable information concerning influence of stakeholder involvement in various aspects on performance of Kabonon-Kapkamak irrigation project in County.

Table 4.6 Distribution of Respondents by Number of Years on Current Farm

Number of Years	Frequency	Percent
Less than 1 year	4	2.5
Between 1-5 years	40	24.7
Above 5 years	118	72.8
Total	162	100.0

Distribution of Respondents by Farm Ownership

The study also examined landownership to the respondents under irrigation project. The results are shown in Table 4.7. The study findings revealed that majority of respondents 119 (73.5%) had family owned farms, 27(16.7%) of respondents rented land

for farming and 16 (9.9%) of respondents indicated the question on farm ownership was not applicable to them. This gives an implication that majority of respondents uses family owned land where they possibly had control over farming activities and don't incur cost of renting land.

Table 4.7 Distribution of Respondents by Farm Ownership

Farm Ownership	Frequency	Percent
Family-owned	119	73.5
Rented	27	16.7
Not applicable	16	9.9
Total	162	100.0

Descriptive Findings and Discussions

The study examined views of sampled stakeholders of Kabonon-Kapkamak irrigation project in County on issues that influence performance of the irrigation project. The study determined the respondents' level of agreement on a five point Likert scale which ranged from strongly disagree (1) to strongly agree (5).

The study sought to determine the extent to which respondents agreed with stakeholder communication indicators on its influence on performance of Kabonon-Kapkamak irrigation project. The study results were presented in Table 4.8 which indicated that majority of respondents (M=4.17 and SD = 1.363) agreed that there is communication between stakeholders and implementers. From the findings, majority of the respondents (M=4.04 and SD = 1.416) agreed that

Stakeholder Communication

communication among stakeholders builds shared understanding on the goals and benefits to the beneficiaries. The respondents further agreed that all project team member representatives are involved in all meetings concerning progress of farm activities representing (M=4.01 and SD = 1.479). Lastly the study result indicated that majority of respondents agreed that there is positive circle of influence among project team members contributing towards increased farm production (M=3.82 and SD = 1.328).

The study findings concur with results by Thoma (2013) that stakeholders must understand what the project is trying to achieve since communication with project team builds an understanding on the objectives and the advantages to the irrigation project beneficiaries. On the off chance that stakeholders plan changes in a business that will affect the local community, communication with neighborhood government offices, pressure groups and the community will construct a comprehension of the aims as it focuses on the success of the business. Therefore, an effective communication program must focus on the stakeholders who have

the greatest influence on the project success (Greenberger, 2016). However, the results were also in agreement with results of Sunindijo (2015) which found out that a project fails if a manager lacks understanding of the project stakeholder interests and attitudes to fine tune communications that contribute towards project performance. The earlier stakeholders are engaged, the more likely one realizes key benefit. It is important to inform, consult, and involve partners for a better planned, informed, and accountable policies, projects, programs, and services.

The study findings give an implication that stakeholder communication influence performance of Kabonon-Kapkamak irrigation project. This is manifested by the communication between stakeholders and implementers which helps in building shared understanding on the goals and benefits to the beneficiaries. This is achieved through involving all project team member representatives all meetings concerning progress of farm activities which will encourage a positive circle of influence among project team members hence increasing farm production.

Table 4.8 Descriptive Statistics on Stakeholder Communication

Stakeholder Communication	N	Min	Max	Mean	Std. Dev
i. There is communication between stakeholders and implementers	162	1	5	4.17	1.363
ii. Communication among stakeholders builds shared understanding on the goals and benefits to the beneficiaries	162	1	5	4.04	1.416
iii. All project team member representatives are involved in all meetings concerning progress of farm activities	162	1	5	4.01	1.479
iv. There is positive circle of influence among project team members contributing towards increased farm production	162	1	5	3.82	1.328

Inferential Analysis

This section describes the results of the relationship between independent variables and the dependent variables and shows the influence of the independent variable on the dependent variable.

Correlation Findings

Correlation analysis was performed to examine the association between stakeholder communication and performance of Kabonon-Kapkamak irrigation project in County, Kenya. Pearson's product – moment correlation (r) was used to explore the relationship between the independent variables and dependent variable to assess both the direction and strength. Each of independent variables and dependent variable where correlation coefficient (r=between +1 and -1) measures the strength and

direction of a linear relationship between each of independent variables and dependent variable. The established relationship between dependent variables and independent variable is described in Table 4.19.

The relationship between stakeholder communication and performance of Kabonon-Kapkamak irrigation project was determined. From the study findings, there was a moderately strong, positive and statistically significant relationship between stakeholder communication and performance of Kabonon-Kapkamak irrigation project ($r = 0.453$; $p < 0.01$). This means that stakeholder communication positively influence performance of Kabonon-Kapkamak irrigation project. The ability to build shared understanding on

the goals and benefits to the beneficiaries by encouraging a positive circle of influence among project team members increases farm production enhance performance of the irrigation scheme. As pointed out by Thoma (2013), stakeholders must understand what the project is trying to achieve since

communication with project team builds an understanding on the goals and the benefits to the irrigation project beneficiaries. Therefore, an effective communication program must focus on the stakeholders who have the greatest influence on the project success (Greenberger, 2016).

Table 4.9 Correlation Coefficient Matrix

		Stakeholder Communication	Project Performance
Stakeholder Communication	Pearson Correlation	1	
	Sig. (2-tailed)		
Project Performance	Pearson Correlation	.453**	1
	Sig. (2-tailed)	0.000	

Multiple Regression Analysis

The research used multiple regression analysis to determine the linear statistical relationship between stakeholder communication, stakeholder knowledge, project governance, environmental uncertainty and project performance. Table 4.24 reveals the value of coefficient of correlation (R) which is 0.662 indicating a positive linear relationship between dependent and independent variables. The coefficient of determination R^2 value was 0.439 and it shows how much of the total variation in the dependent variable, project performance,

was explained by the independent variables; stakeholder communication, stakeholder knowledge, project governance, environmental uncertainty. Therefore, the study results revealed that 43.9% can be explained by independent variables in relation to dependent variable. The adjusted R^2 value is 0.426 which is slightly lower than R^2 value; it is an indicator of relationship between the independent and dependent variables since it are sensitive when irrelevant variables are added. However, the typical error when the model is used to predict project performance is 0.34071.

Table 4.10 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.662	.439	.426	.34071

Assessing the Fit of Multiple Regression Model

The study conducted Analysis of Variance (ANOVA) to examine whether the multiple regression model was fit for the data. This helped to find out if project performance can be predicted without relying on stakeholder communication, stakeholder knowledge, project governance and environmental uncertainty. The results of Analysis of Variance (ANOVA) are shown in Table 4.11. The study findings provides F test which shows an overall test of significance of the fitted regression

model. The F value indicates that all the variables in the equation were significant hence the overall regression model is significant.

The F-statistics produced ($F = 34.196$) was significant at $p < 0.05$ thus confirming the fitness of the model and therefore, there is statistically significant relationship between stakeholder involvement and project performance. This indicates that regression model predicts the dependent variable significantly and was good fit for the data.

Table 4.11 ANOVA for Testing Multiple Regression Model

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	15.878	4	3.970	34.196	.000
Residual	20.315	175	.116		
Total	36.193	179			

Regression Analysis Coefficients

The study conducted t-test of statistical significance of each individual regression coefficient and results

are presented in Table 4.11. The findings indicate that all the t values were significant implying that independent variable is a predictor of the dependent variable; stakeholder communication ($t=4.236$ $p<0.05$). However, the β coefficients were all significant to be used for multiple regression as follows; stakeholder communication ($\beta_1=0.257$, $p<0.05$). This implies that a unit increase in stakeholder communication caused a 0.257 increase in project performance.

Therefore the multiple regression model equation was developed from the coefficient as shown in equation 4.1;

$$Y = 0.847 + 0.257 X_1 + X_4 \dots \dots \dots \text{Equa 4.1}$$

This can be translated to;

$$\text{Project Performance} = 0.847 + 0.257 \dots \dots \text{Equa 4.2}$$

Table 4.12 Regression Analysis Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.847	.318		2.666	.008
Stakeholder Communication	.215	.051	.257	4.236	.000

Hypothesis Testing

In this study, all the four hypotheses were tried utilizing the multiple regression model. For every hypothesis, the relapse condition was first acquired using the β coefficients on hold of best fit. The choice decide was that if the p esteem is not as much as regular 0.05, the invalid theory was rejected and when it's over 0.05 investigation neglected to dismiss the invalid hypothesis.

The hypotheses test results are presented in Table 4.12. The null hypothesis H_{01} stated that stakeholder communication has no significant relationship with performance of Kabonon-Kapkamak irrigation project in Elgeyo Marakwet County. However, the study findings revealed that stakeholder communication has a positive and statistically significant influence on project performance ($\beta_1=0.257$, $p<0.05$). Therefore, the study findings rejected the null hypothesis. This gives an implication that communication between stakeholders and implementers helps in building shared understanding on the goals and benefits to the beneficiaries.

The study findings concur with study done by (Thoma, 2013) that stakeholders must understand what the project is trying to achieve since communication with project team builds an understanding on the goals and the benefits to the irrigation project beneficiaries. If stakeholders plan changes in a business that will affect the neighborhood community, correspondence with nearby government offices, pressure groups and the community will build a comprehension of the aims as it focuses on the success of the business. Therefore, an effective communication program

must focus on the stakeholders who have the greatest influence on the project success.

The study findings also agreed with study findings of Sunindijo (2015) who found out that a project fails if a manager lacks understanding of the project stakeholder interests and attitudes to fine tune communications that contribute towards project performance. The earlier stakeholders are engaged in project activities, the more likely one realizes key benefit. It is important to inform, consult, and involve all partners for a better planned, informed, and accountable policies, projects, programs, and services.

Results from Interviews

Response from interview schedule was obtained from top management; project manager, National irrigation board representatives and ministry of agriculture officials. Their responses were grouped into themes and discussed basing on the study objectives to draw conclusions. However, it was found out that stakeholder communication influence performance of Kabonon-Kapkamak irrigation project. The respondents indicated that there is communication between all stakeholders associated with irrigation projects. This has influenced the effective understanding of what is needed from each stakeholder and the need required by farmers in order to increase crop production. They indicated that they achieve this effective communication through call for meetings with all project team member concerning progress of farm activities quarterly. At this point, they get an opportunity to air their challenges towards their goals, new ideas and technology which encourages a positive circle of

influence among project team members hence increasing farm production.

Summary of Findings, Conclusion and Recommendations

Summary of the Study Findings

From the findings the following summary, conclusions and recommendations can be drawn.

Stakeholder Communication and Project Performance

The study findings showed that communication between stakeholders and implementers helps in building shared understanding on the goals and benefits to the beneficiaries. It was noted that all the project team member representatives are involved in all meetings concerning progress of farm activities. In addition, the findings indicated that there is positive circle of influence among project team members contributing towards increased farm production. However, it indicates a positive correlation between stakeholder communication and irrigation project performance. The findings on influence of stakeholder communication on irrigation project performance agrees with stakeholder theory which points out bringing interests of stakeholders to row in the same direction as it is critical in project success. It also shapes the perception of the project stakeholders and the rest of the surrounding communities.

Conclusion of the Study

These conclusions can be evidence from the specific objectives that stakeholder communication has a positive and statistically significant influence on project performance. This is manifested by the communication between stakeholders and implementers which helps in building shared understanding on the goals and benefits to the beneficiaries. This is achieved through involving all project team member representatives all meetings concerning progress of farm activities which will encourage a positive circle of influence among project team members hence increasing farm production.

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Recommendation of the Study

Recommendations for Practice and Policy

Stakeholders should always involve one another in communication at all levels to bring understanding of what the project is trying to achieve its goals to realize its success. The stakeholders should always communicate activities which impact on the local community, communication with local government agencies, pressure groups and the community. This builds a clear understanding of the project intentions as it focuses on positive impact on its beneficiaries.

Recommendations for Non-Governmental Organizations (NGO)

Leaderships for irrigation projects should involve all stakeholders in order to sustain project coordination and accountability to helps in making adjustments on non-performing irrigation system hence increased farm production. Stakeholders should improve on funding scheme to support long-term viable project implementation in order to improve farm performance and high yield of crop production.

Recommendations for Theories

The study recommends the use of stakeholder theory because the theory points out getting all the irrigation project stakeholders and their interest's row in the same direction as it is critical to the irrigation project's success. It shapes the perception of the project stakeholders and the rest of the surrounding communities. Once the project stakeholders, their biggest needs, interests are identified, it helps to draft a communications plan which encourages collaboration to build a system of supports that responds to the needs of the intended beneficiaries.

Suggestions for Further Studies

A research should further be carried on influence of environmental uncertainty on project performance of irrigation farms in order to get deeper understanding on its influence. Further research should be done on influence of stakeholder involvement on sustainability of irrigation projects having a control variable size of the farm.

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